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=> FIL HCAPLUS

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FULL ESTIMATED COST	0.21	0.21

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FILE COVERS 1907 - 25 Sep 2005 VOL 143 ISS 14
FILE LAST UPDATED: 23 Sep 2005 (20050923/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s dialkyl carbonate
         40690 DIALKYL
           218 DIALKYLS
         40820 DIALKYL
                 (DIALKYL OR DIALKYLS)
        268031 CARBONATE
         64521 CARBONATES
        299695 CARBONATE
                 (CARBONATE OR CARBONATES)
L1         834 DIALKYL CARBONATE
                 (DIALKYL(W)CARBONATE)

=> s l1 and process
       2149075 PROCESS
       1438162 PROCESSES
       3197607 PROCESS
                 (PROCESS OR PROCESSES)
L2         212 L1 AND PROCESS

=> s l2 and copper catalyst
        857997 COPPER
           428 COPPERS
        858061 COPPER
                 (COPPER OR COPPERS)
        700526 CATALYST
        703993 CATALYSTS
        898347 CATALYST
                 (CATALYST OR CATALYSTS)
          8577 COPPER CATALYST
                 (COPPER(W)CATALYST)
L3           2 L2 AND COPPER CATALYST

=> s l2 and catalyst
        700526 CATALYST
        703993 CATALYSTS
```

```
        898347 CATALYST
                  (CATALYST OR CATALYSTS)
L4          145 L2 AND CATALYST

=> s l4 and ionic halogen
        256067 IONIC
           461 IONICS
        256308 IONIC
                  (IONIC OR IONICS)
        104502 HALOGEN
         21211 HALOGENS
        115225 HALOGEN
                  (HALOGEN OR HALOGENS)
            30 IONIC HALOGEN
                  (IONIC(W)HALOGEN)
L5           1 L4 AND IONIC HALOGEN

=> s l4 and copper
        857997 COPPER
           428 COPPERS
        858061 COPPER
                  (COPPER OR COPPERS)
L6          24 L4 AND COPPER

=> s l6 and halogen
        104502 HALOGEN
         21211 HALOGENS
        115225 HALOGEN
                  (HALOGEN OR HALOGENS)
L7           2 L6 AND HALOGEN

=> d his

     (FILE 'HOME' ENTERED AT 14:44:52 ON 25 SEP 2005)

     FILE 'HCAPLUS' ENTERED AT 14:45:02 ON 25 SEP 2005
L1         834 S DIALKYL CARBONATE
L2         212 S L1 AND PROCESS
L3           2 S L2 AND COPPER CATALYST
L4         145 S L2 AND CATALYST
L5           1 S L4 AND IONIC HALOGEN
L6          24 S L4 AND COPPER
L7           2 S L6 AND HALOGEN

=> d l3 ibib abs hitstr tot

L3   ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER:        2005:220207  HCAPLUS
DOCUMENT NUMBER:         142:280559
TITLE:                   Use of a ionic halide free copper
                         catalyst for the production of dialkyl
                         carbonates
INVENTOR(S):             Stibrany, Robert T.; Mehnert, Christian P.; Matturro,
                         Michael G.
PATENT ASSIGNEE(S):      USA
SOURCE:                  U.S. Pat. Appl. Publ., 9 pp.
                         CODEN: USXXCO
DOCUMENT TYPE:           Patent
LANGUAGE:                English
```

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005054868	A1	20050310	US 2003-655995	20030905
WO 2005026097	A1	20050324	WO 2004-US25363	20040804

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-655995 A 20030905
OTHER SOURCE(S): MARPAT 142:280559

AB The invention relates to a non-corrosive **process** for the preparation of **dialkyl carbonate** by reacting carbon monoxide, alkanol and an oxygen-containing gas in the presence of a ionic halogen free **copper catalyst.** Thus, di-Me carbonate was prepared by reacting carbon monoxide, methanol and oxygen in the presence of [1,1'-bis(1-butylbenzimidazol-2-yl)pentane] copper (II) di(trifluoromethanesulfonate).

L3 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:142692 HCAPLUS
DOCUMENT NUMBER: 114:142692
TITLE: **Process** for preparation of **dialkyl carbonates** from alcs., carbon monoxide and oxygen in the presence of cyclic ureas as cosolvents and **copper catalysts**
INVENTOR(S): Joerg, Klaus; Kummer, Rudolf; Mueller, Franz Josef
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 4 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3926710	A1	19910214	DE 1989-3926710	19890812
EP 413217	A2	19910220	EP 1990-114912	19900803
EP 413217	A3	19920212		
EP 413217	B1	19940608		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
ES 2054176	T3	19940801	ES 1990-114912	19900803
US 5151541	A	19920929	US 1990-562708	19900806
JP 03109359	A2	19910509	JP 1990-211748	19900813

PRIORITY APPLN. INFO.: DE 1989-3926710 A 19890812
OTHER SOURCE(S): CASREACT 114:142692; MARPAT 114:142692

AB A **process** for the preparation of **dialkyl carbonates** ROC(O)OR (R = C1-10-alkyl) comprises the reaction of alcs. with CO and oxygen in the presence of a Cu catalyst and a cyclic urea as cosolvent at

elevated temperature and pressure. A mixture of MeOH 105, CuCl 10.5, and dimethylethylene urea 40 g was heated in a corrosion-resistant autoclave to 90° for 15 min 8 bar oxygen; oxygen was replaced and the mixture was heated for 30 min at 35 bar CO to give 76% MeOC(O)OMe.

=> d l5 ibib abs hitstr tot

L5 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:220207 HCAPLUS
DOCUMENT NUMBER: 142:280559
TITLE: Use of a ionic halide free copper **catalyst** for the production of **dialkyl carbonates**
INVENTOR(S): Stibrany, Robert T.; Mehnert, Christian P.; Matturro, Michael G.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005054868	A1	20050310	US 2003-655995	20030905
WO 2005026097	A1	20050324	WO 2004-US25363	20040804

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-655995 A 20030905
OTHER SOURCE(S): MARPAT 142:280559
AB The invention relates to a non-corrosive **process** for the preparation of **dialkyl carbonate** by reacting carbon monoxide, alkanol and an oxygen-containing gas in the presence of a **ionic halogen** free copper **catalyst.** Thus, di-Me carbonate was prepared by reacting carbon monoxide, methanol and oxygen in the presence of [1,1'-bis(1-butylbenzimidazol-2-yl)pentane] copper (II) di(trifluoromethanesulfonate).

=> d l6 ibib abs hitstr tot

L6 ANSWER 1 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:349044 HCAPLUS
DOCUMENT NUMBER: 142:394138
TITLE: Water-resistant carbonylation **catalyst** system for the production of diaryl carbonates via the direct carbonylation of phenolic compounds
INVENTOR(S): Soloveichik, Grigorii Lev; Chuck, Timothy Leigh;

Shalyaev, Kirill Vladimirovich; Pressman, Eric James; Bonitatebus, Peter John
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005085656	A1	20050421	US 2003-687411	20031015
WO 2005040089	A2	20050506	WO 2004-US30610	20040917

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-687411 A 20031015
OTHER SOURCE(S): CASREACT 142:394138

AB A method of increasing the amount of diaryl carbonates (e.g., di-Ph carbonate) produced per amount of **catalyst** consumed in a phenolic compound (e.g., phenol) carbonylation **process** is described. Phenolic compound carbonylation produces water as a reaction byproduct which reduces the turnover number (TON) of the **catalyst.** A mixture of a phenolic precursor, a base-containing **catalyst** and co-**catalyst** components and at least one chemical additive comprising a halide or hydroxide of alkali metal or alkaline earth metal when carbonylated together under specific conditions increases the TON and water resistivity of a palladium **catalyst.** The metal halide likely makes the **catalyst** less susceptible to degradation by water hence increasing the reaction yield per weight of **catalyst** consumed.

L6 ANSWER 2 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:220207 HCAPLUS
DOCUMENT NUMBER: 142:280559
TITLE: Use of a ionic halide free **copper catalyst** for the production of **dialkyl carbonates**
INVENTOR(S): Stibrany, Robert T.; Mehnert, Christian P.; Matturro, Michael G.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005054868	A1	20050310	US 2003-655995	20030905

WO 2005026097 A1 20050324 WO 2004-US25363 20040804
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 2003-655995 A 20030905
OTHER SOURCE(S): MARPAT 142:280559
AB The invention relates to a non-corrosive **process** for the preparation of **dialkyl carbonate** by reacting carbon monoxide, alkanol and an oxygen-containing gas in the presence of a ionic halogen free **copper catalyst.** Thus, di-Me carbonate was prepared by reacting carbon monoxide, methanol and oxygen in the presence of [1,1'-bis(1-butylbenzimidazol-2-yl)pentane] **copper** (II) di(trifluoromethanesulfonate).

L6 ANSWER 3 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:1007922 HCAPLUS
DOCUMENT NUMBER: 140:43775
TITLE: Method and apparatus for preparing a **dialkyl carbonate**
INVENTOR(S): Van de Broek, Jan; Bouwens, Stephan; Campman, Maarten; Favre, Daniel; Van Gool, Cornelis Adrianus Maria; Kalle, Leon; Moloney, George P.
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003236428	A1	20031225	US 2003-250067	20030602
WO 2004000780	A1	20031231	WO 2003-US19359	20030618
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1562889	A1	20050817	EP 2003-761136	20030618
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

PRIORITY APPLN. INFO.:
US 2002-391389P P 20020625
US 2002-401916P P 20020808
US 2003-250067 A 20030602
WO 2003-US19359 W 20030618

OTHER SOURCE(S): CASREACT 140:43775

AB A method of preparing a **dialkyl carbonate** (e.g., di-Me carbonate) includes reacting an alkanol (e.g., methanol), oxygen, carbon monoxide, and a **catalyst** to form a mixture that includes a **dialkyl carbonate** and an alkyl chloroformate (e.g., Me chloroformate). The mixture is separated into a liquid fraction and a gaseous fraction, and the alkyl chloroformate is removed from the gaseous fraction. Also described is an apparatus for carrying out the method. The method is particularly useful for preventing corrosion in a cold-wash unit that removes further organic impurities from the gaseous fraction; **process** flow diagrams are presented.

L6 ANSWER 4 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:633326 HCAPLUS
DOCUMENT NUMBER: 139:166196
TITLE: Method and apparatus for preparing a **dialkyl carbonate** and a method for removal of corrosive alkyl chloroformates from the apparatus
INVENTOR(S): Boden, Eugene Pauling; Kailasam, Ganesh; Lewis, Larry Neil; Nisoli, Alberto; Ofori, John Yaw; Gonzalez, Angel Sanchez; Fernandez, Ignacio Vic
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S. Pat. Appl. 2003 60,650.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003153782	A1	20030814	US 2002-227111	20020823
US 2003060650	A1	20030327	US 2001-682286	20010814
TW 584630	B	20040421	TW 2002-91117318	20020801
US 2005033078	A1	20050210	US 2003-740578	20031222
US 2005033079	A1	20050210	US 2003-740801	20031222
US 2005019226	A1	20050127	US 2004-917222	20040812
PRIORITY APPLN. INFO.:			US 2001-682286	A2 20010814
			US 2002-227111	B1 20020823

AB Unexpected corrosion of downstream sections of a **dialkyl carbonate** manufacturing apparatus has been traced to alkyl chloroformate impurities, which slowly decompose to yield hydrochloric acid. A **process** and apparatus for **dialkyl carbonate** synthesis reduce corrosion by phys. removing or chemical decomposing the alkyl chloroformate impurities within the corrosion-resistant upstream sections of the apparatus The alkyl chloroformate may be decomposed by passing it through a passageway at 30-130° for 0.5-10 h. The passageway may include one or more holding vessels or a tubular section that promotes plug flow.

L6 ANSWER 5 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:222358 HCAPLUS
DOCUMENT NUMBER: 138:238546
TITLE: Production of alkyl chloroformate-free **dialkyl carbonates** used in preparation of polycarbonates
INVENTOR(S): Boden, Eugene Pauling; Fernandez, Ignacio Vic
PATENT ASSIGNEE(S): General Electric Company, USA

SOURCE: U.S. Pat. Appl. Publ., 21 pp., Cont.-in-part of U.S. Ser. No. 682,285.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003055199	A1	20030320	US 2001-682284	20010814
US 6784277	B2	20040831		
US 2003060650	A1	20030327	US 2001-682286	20010814
US 2003092872	A1	20030515	US 2001-682285	20010814
WO 2003016258	A1	20030227	WO 2002-US24731	20020801
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1419132	A1	20040519	EP 2002-756947	20020801
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005500378	T2	20050106	JP 2003-521187	20020801
US 2005033080	A1	20050210	US 2003-740854	20031222

PRIORITY APPLN. INFO.:
US 2001-682285 A2 20010814
US 2001-682286 A2 20010814
US 2001-682284 A 20010814
WO 2002-US24731 W 20020801

AB Production of a **dialkyl carbonate** comprises reacting an alc., oxygen, carbon monoxide, and a **catalyst** to form a mixture comprising a **dialkyl carbonate**, an alkyl chloroformate, hydrochloric acid, water, carbon dioxide, and carbon monoxide, and removing alkyl chloroformate from the mixture Alkyl chloroformate impurities are shown to slowly decompose to yield hydrochloric acid and cause corrosion of downstream sections of **dialkyl carbonate** manufacturing equipment. The invention method reduces corrosion by phys. removing or chemical decomposing the alkyl chloroformate impurities within the corrosion-resistant upstream sections of the **process** line. The alkyl chloroformate-free **dialkyl carbonates** produced by the method are intermediates in manufacturing diaryl carbonates and polycarbonates.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:154385 HCAPLUS
DOCUMENT NUMBER: 138:189792
TITLE: Method for the manufacture of **dialkyl carbonates**, their use in the manufacture of polycarbonates and corrosion prevention by removal of alkyl chloroformate and its byproducts
INVENTOR(S): Boden, Eugene Pauling; Vic Fernandez, Ignacio
PATENT ASSIGNEE(S): General Electric Company, USA

SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003016258	A1	20030227	WO 2002-US24731	20020801
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003055199	A1	20030320	US 2001-682284	20010814
US 6784277	B2	20040831		
EP 1419132	A1	20040519	EP 2002-756947	20020801
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005500378	T2	20050106	JP 2003-521187	20020801

PRIORITY APPLN. INFO.:
US 2001-682284 A 20010814
US 2001-682285 A2 20010814
US 2001-682286 A2 20010814
WO 2002-US24731 W 20020801

AB Unexpected corrosion of the downstream section of a **dialkyl carbonate** (e.g., di-Me carbonate) manufacturing apparatus has been traced to alkyl chloroformate impurities, which slowly decompose to yield hydrochloric acid. A **process** and apparatus are presented for **dialkyl carbonate** synthesis which reduces apparatus corrosion by phys. removing or chemical decomposing the alkyl chloroformate (e.g., Me chloroformate) impurities within the corrosion-resistant upstream sections of the apparatus

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:154384 HCAPLUS
DOCUMENT NUMBER: 138:189791
TITLE: Method and apparatus for preparing a **dialkyl carbonate** with reduction in the corrosion caused by the formation of alkyl chloroformate and its byproducts
INVENTOR(S): Boden, Eugene Pauling; Kailasam, Ganesh; Lewis, Larry Neil; Nisoli, Alberto; Ofori, John Yaw; Sanchez Gonzalez, Angel; Vic Fernandez, Ignacio
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2003016257	A1	20030227	WO 2002-US24364	20020730
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003060650	A1	20030327	US 2001-682286	20010814
EP 1419131	A1	20040519	EP 2002-756863	20020730
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
JP 2005520784	T2	20050714	JP 2003-521186	20020730
TW 584630	B	20040421	TW 2002-91117318	20020801
US 2005033079	A1	20050210	US 2003-740801	20031222
PRIORITY APPLN. INFO.:			US 2001-682286 A	20010814
			WO 2002-US24364 W	20020730

AB Unexpected corrosion of downstream sections of a **dialkyl carbonate** (e.g., di-Me carbonate) manufacturing apparatus has been traced to alkyl chloroformate (e.g., Me chloroformate) impurities which slowly decompose to give hydrochloric acid. An improved **process** and apparatus for **dialkyl carbonate** manufacture and to reduce corrosion by phys. removing or chemical decomposing the alkyl chloroformate impurities within the corrosion-resistant upstream sections of the apparatus is described. **Process** flow diagrams are presented.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 8 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:906229 HCAPLUS
DOCUMENT NUMBER: 136:37329
TITLE: **Process** and **catalysts** for producing **dialkyl carbonates** from alkyl allophanates and alkanols
INVENTOR(S): Mizukami, Masamichi; Arai, Yoshihisa; Harada, Hidefumi
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: U.S. Pat. Appl. Publ., 6 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2001051740	A1	20011213	US 2001-877044	20010611
US 6359163	B2	20020319		
JP 2001354623	A2	20011225	JP 2000-175064	20000612
EP 1167339	A2	20020102	EP 2001-113530	20010612
EP 1167339	A3	20020116		
EP 1167339	B1	20030502		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
ES 2195974	T3	20031216	ES 2001-1113530	20010612
PRIORITY APPLN. INFO.:			JP 2000-175064 A	20000612

OTHER SOURCE(S): CASREACT 136:37329; MARPAT 136:37329
AB **Dialkyl carbonates** RO2COR (R = alkyl; e.g., di-Bu carbonate) are prepared in high yield and selectivity by the deamidation-esterification reaction of alkyl allophanates RO2CNHCONH2 (e.g., Bu allophanate) and an alkanol ROH (e.g., butanol) in the presence of a **catalyst** (e.g., dibutyltin oxide). **Dialkyl carbonates** (e.g., di-Bu carbonate) may also be prepared by the reaction of urea and/or an alkyl carbamate (e.g., Bu carbamate), where the allophanate produced as a byproduct is reused as one of raw materials; a **process** flow diagram is presented.

L6 ANSWER 9 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:900597 HCAPLUS
DOCUMENT NUMBER: 134:42572
TITLE: Carbonylation **process** and **catalyst** system for manufacturing **dialkyl carbonates** from alkanols, carbon monoxide and oxygen
INVENTOR(S): Tanaka, Masahide; Kimura, Takato; Shimoda, Tomoaki
PATENT ASSIGNEE(S): General Electric Co., USA
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000076950	A1	20001221	WO 2000-US15669	20000607
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6258923	B1	20010710	US 2000-584672	20000531
EP 1189870	A1	20020327	EP 2000-941256	20000607
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001055358	A2	20010227	JP 2000-172057	20000608
PRIORITY APPLN. INFO.:			JP 1999-165585 A	19990611
			WO 2000-US15669 W	20000607

OTHER SOURCE(S): MARPAT 134:42572
AB **Dialkyl carbonates** (e.g., di-Me carbonate), useful as monomers for aromatic polycarbonates, are prepared in high yield and selectivity from CO, O2, and an alc. (e.g., methanol) in the presence of a **catalyst** system comprising: (i) a cupric halide (e.g., cupric chloride); and (ii) a compound capable of producing a **copper** halide alkoxide by reaction with a cupric halide [i.e., Group IA and IIA alkoxides (e.g., sodium methoxide), quaternary ammonium and phosphonium alkoxides].
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:810921 HCAPLUS
DOCUMENT NUMBER: 132:24111
TITLE: Distillation **process** for the separation of **dialkyl carbonates** which are prepared from urea and alcohols from contaminating alkyl carbamates by the addition of aromatic hydroxy compounds
INVENTOR(S): Ohshida, Takuo; Ohgi, Hiroaki; Arai, Yoshihisa; Mizukami, Masamichi
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 965577	A1	19991222	EP 1999-111039	19990614
EP 965577	B1	20020904		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2000001461	A2	20000107	JP 1998-167187	19980615
US 6169197	B1	20010102	US 1999-332951	19990615
PRIORITY APPLN. INFO.:			JP 1998-167187 A	19980615

AB **Dialkyl carbonates** (e.g., di-Bu carbonate), which are prepared from urea and alcs. (e.g., n-butanol), are separated from contaminating alkyl carbamates (e.g., Bu carbamate) by adding an aromatic hydroxy compound (e.g., phenol) to the carbonate mixture and distilling the mixture under reduced pressure to produce a head product containing the **dialkyl carbonate** and the aromatic hydroxy compound while the alkyl carbamate is obtained as the bottoms product.
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 11 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:231275 HCAPLUS
DOCUMENT NUMBER: 128:258710
TITLE: Carbonylation **process** and **catalysts** for the production of carbonic acid diesters from alcohols
INVENTOR(S): Minami, Takeshi; Yoneda, Noriyuki; Shiroto, Yoshimi; Kobayashi, Haruto
PATENT ASSIGNEE(S): Chiyoda Corp., Japan
SOURCE: Ger. Offen., 18 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19727163	A1	19980409	DE 1997-19727163	19970626
US 5767303	A	19980616	US 1997-876239	19970616
IN 183238	A	19991009	IN 1997-CA1156	19970618

CN 1178718	A	19980415	CN 1997-117189	19970627
CN 1102076	B	20030226		
JP 10156189	A2	19980616	JP 1997-191936	19970702
JP 3412079	B2	20030603		

PRIORITY APPLN. INFO.: JP 1996-283022 A 19961004
OTHER SOURCE(S): MARPAT 128:258710

AB Carbonic acid diesters (e.g., di-Me carbonate) are prepared in high yield and selectivity and without the use of phosgene by the reaction of alcs. (e.g., MeOH) with carbon monoxide and oxygen in the presence of a **catalyst** system comprising: (a) Cu or a Cu compound (e.g., CuCl); (b) a heterocyclic compound containing ≥1 N atom in its ring (e.g., pyridine); and a(n) (un)substituted glycol mono- or diether (e.g., triethylene glycol di-Me ether). **Process** flow diagrams are presented.

L6 ANSWER 12 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:516387 HCAPLUS
DOCUMENT NUMBER: 122:264908
TITLE: Production of dimethyl carbonate by methoxycarbonylation of methanol using **copper** zeolite **catalysts**
INVENTOR(S): King, Stanley S. T.; Jones, Mark E.; Olken, Michael M.
PATENT ASSIGNEE(S): The Dow Chemical Company, USA
SOURCE: U.S., 5 pp. Cont.-in-part of U.S. Ser. No. 954,771, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5391803	A	19950221	US 1994-176744	19940103

PRIORITY APPLN. INFO.: US 1994-176744 B2 19940103
US 1992-954771 19920930
OTHER SOURCE(S): CASREACT 122:264908; MARPAT 122:264908

AB A **process** for producing **dialkyl carbonates** which comprises contacting an alkanol, carbon monoxide, and oxygen with a **catalyst** to produce **dialkyl carbonate**, the **catalyst** having been prepared by heating a solid **copper** compound in the presence of a zeolite to form a zeolite containing **copper.** Thus, e.g., a **catalyst** was prepared by heating a solid mixture containing 25 weight percent of cuprous chloride and a hydrogen Y zeolite having a framework silica/alumina molar ratio of 12:1 and a bulk silica/alumina molar ratio of 10.9:1 at 650° for 48 h; a mixture of MeOH/CO/O2/N2 having a mole ratio 0.88/4/0.5/2 was flowed over this this **catalyst** at 130°; the selectivity to di-Me carbonate was 80% after 10 and 20 h; the initial productivity to DMC was 4 lbs/ft3/h and was 4 lbs/ft3/h after 12 h.

L6 ANSWER 13 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:420633 HCAPLUS
DOCUMENT NUMBER: 122:239182
TITLE: Production of **dialkyl carbonates** via oxidative carbonylation of alcohols with carbon monoxide and oxygen catalyzed by supported **copper**-quaternary ammonium salt **catalysts**

INVENTOR(S): Molzahn, David C.; Jones, Mark E.; Hartwell, George E.; Puga, Jose
PATENT ASSIGNEE(S): Dow Chemical Co., USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5387708	A	19950207	US 1993-165060	19931210
PRIORITY APPLN. INFO.:			US 1993-165060	19931210

OTHER SOURCE(S): CASREACT 122:239182; MARPAT 122:239182

AB A **process** for the production of **dialkyl carbonates**, such as di-Me carbonate. In one aspect, the **process** involves contacting under reaction conditions an alkanol, such as methanol, with carbon monoxide and oxygen in the vapor phase and in the presence of a **catalyst** containing (1) a **copper** halide, a **copper** oxyhalide, or a **copper** carboxylate halide, (2) a quaternary ammonium salt, and (3) a support component. The **catalyst** achieves high selectivity and productivity to **dialkyl carbonates.** In a second aspect, the addition of a chlorocarbon **catalyst** regenerator to the alkanol feed increases **catalyst** stability and lifetime and increases the selectivity and/or productivity to **dialkyl carbonates.** Thus, e.g., di-Me carbonate production using CuCl/Et4NCl on zeolite Y exceeded that with CuCl on zeolite Y by more than a factor of 4.

L6 ANSWER 14 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:340691 HCAPLUS
DOCUMENT NUMBER: 122:105265
TITLE: **Process** and platinum-group metal **catalysts** for the preparation of **dialkyl carbonates** from alkyl nitrites and carbon monoxide
INVENTOR(S): Jentsch, Joerg-Dietrich; Klausener, Alexander; Landscheidt, Heinz; Wolters, Erich; Zirngiebl, Eberhard
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4314038	A1	19941103	DE 1993-4314038	19930429
EP 623583	A1	19941109	EP 1994-105984	19940418
EP 623583	B1	19970319		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
ES 2098813	T3	19970501	ES 1994-105984	19940418
JP 06329599	A2	19941129	JP 1994-106160	19940422
US 5414104	A	19950509	US 1994-231607	19940422
CA 2122228	AA	19941030	CA 1994-2122228	19940426
CN 1100089	A	19950315	CN 1994-104650	19940429

PRIORITY APPLN. INFO.: DE 1993-4314038 A 19930429
OTHER SOURCE(S): CASREACT 122:105265; MARPAT 122:105265
AB The title compds. O:C(OR)2 [R = (un)branched C1-4 alkyl] (e.g., di-Me carbonate) are prepared by the reaction of alkyl nitrites RONO (e.g., MeONO) with CO in the presence of a platinum-group metal (e.g., Pd, etc.) halides (e.g., Li2PdCl4) or halide complexes on a metal phosphate support with the continuous or discontinuous addition of a hydrogen halide (e.g., HCl). A volume ratio of nitrite-CO of 0.1-10:1 is employed and the reaction is conducted at 50-150°/0.8-7 bar.

L6 ANSWER 15 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1995:248639 HCAPLUS
DOCUMENT NUMBER: 122:12517
TITLE: Manufacture of carbonic acid diesters by catalytic transesterification
INVENTOR(S): Kirishiki, Masaru; Onda, Yoshuki; Tsuneki, Hideaki
PATENT ASSIGNEE(S): Nippon Catalytic Chem Ind, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06238165	A2	19940830	JP 1993-50239	19930215

PRIORITY APPLN. INFO.: JP 1993-50239 19930215
OTHER SOURCE(S): MARPAT 122:12517
AB A **process** which facilitates the separation of **catalyst** from reaction products comprises reacting (un)substituted alkylene carbonates with ROH (R = C1-20-alkyl, alkenyl, aralkyl, cycloalkyl, alkoxyalkyl) in the presence of mixed oxides of Mg and transition metals. Soaking 60.0 g MgO in 41.4 g water containing 8.89 g Co nitrate-6H2O, drying overnight, and calcining at 500° for 5 h gave a **catalyst** with Co/Mg ratio 0.0205. The **catalyst** 15.2, ethylene carbonate 88, and MeOH 64 g were heated at 60° for 2 h to give 33 mol% ethylene glycol and 36 mol% di-Me carbonate.

L6 ANSWER 16 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:8213 HCAPLUS
DOCUMENT NUMBER: 120:8213
TITLE: **Process** for the preparation of **dialkyl carbonates** from alkyl nitrites
INVENTOR(S): Wolters, Erich; Landscheidt, Heinz; Klausener, Alexander; Puppe, Lothar
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 559001	A1	19930908	EP 1993-102466	19930217
EP 559001	B1	19960508		

R: BE, CH, DE, FR, GB, IT, LI, NL

DE 4206526	A1	19930909	DE 1992-4206526		19920302
JP 06065156	A2	19940308	JP 1993-59426		19930225
US 5360922	A	19941101	US 1993-23302		19930226
PRIORITY APPLN. INFO.:			DE 1992-4206526	A	19920302

OTHER SOURCE(S): MARPAT 120:8213

AB CO(OR)2 (R = alkyl) were prepared by reaction of CO with RONO (0.1-10:1 volume ratio) optionally in the presence of an inert gas, ROH, or NO in a continuous gas phase **process** at 50-150° using a **catalyst** comprising a platinum group metal halide (complex) supported on an aluminosilicate zeolite-containing acid centers, preferably in the H+ form. The **catalyst** may be prepared in situ by treatment of a platinum group metal or halide-free platinum group metal compound with a hydrogen halide; the **catalyst** may also contain a compound of Sb, Bi, Al, Cu, U, Nb, Ta, Sn, Fe, Co, Ni, or their mixts. Thus, H-Y zeolite was treated with aqueous Li2PdCl4 followed by drying in vacuo at 80°. To a tube reactor containing the above **catalyst** at 90° was added a gaseous mixture of N2 55, MeONO 20, CO 20, and MeOH 5% at a space velocity of 1000 1/1/h to give CO(OMe)2 with a space time yield = 99%. Use of the aluminosilicate carrier improves selectivity and eliminated oxalate production

L6 ANSWER 17 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1993:625595 HCAPLUS
DOCUMENT NUMBER: 119:225595
TITLE: **Process** for the preparation of **dialkyl carbonates**
INVENTOR(S): Wolters, Erich; Landscheidt, Heinz; Klausener, Alexander; Puppe, Lothar
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 558996	A1	19930908	EP 1993-102461	19930217
EP 558996	B1	19960501		

R: BE, CH, DE, FR, GB, IT, LI, NL

DE 4206527	A1	19930909	DE 1992-4206527		19920302
JP 06041021	A2	19940215	JP 1993-59399		19930225
US 5319124	A	19940607	US 1993-23303		19930226
PRIORITY APPLN. INFO.:			DE 1992-4206527	A	19920302

OTHER SOURCE(S): MARPAT 119:225595

AB O:C(OR)2 [R=(branched) C1-4 alkyl], were prepared by continuous gas-phase reaction of RONO with CO, optionally in the presence of an inert gas, ROH, and/or NO using an Al silicate-supported Pt group halide complex **catalyst.** Thus, Al2O3.SiO2 was treated with aqueous LiPdCl4 and the resulting material was heated at 80° in vacuo. A tube reactor packed with this **catalyst** and heated to 90° was charged with a mixture of N 55, MeONO 20, CO 20, and MeOH 5% to give O:C(OMe)2.

L6 ANSWER 18 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:612025 HCAPLUS
DOCUMENT NUMBER: 117:212025
TITLE: **Process** for the preparation of

dialkyl carbonates
INVENTOR(S): Buysch, Hans Josef; Klausener, Alexander
PATENT ASSIGNEE(S): Bayer A.-G., Germany
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 499924	A1	19920826	EP 1992-102154		19920210
EP 499924	B1	19941005			
R: BE, DE, ES, FR, GB, IT, NL					
DE 4105554	A1	19920827	DE 1991-4105554		19910222
ES 2061287	T3	19941201	ES 1992-102154		19920210
US 5218135	A	19930608	US 1992-834457		19920212
JP 05097774	A2	19930420	JP 1992-61555		19920217
PRIORITY APPLN. INFO.:			DE 1991-4105554	A	19910222

OTHER SOURCE(S): MARPAT 117:212025
AB **Dialkyl carbonates** were prepared from alkylene oxides, CO2 and alcs. in the presence of bifunctional **catalysts.** The first step comprises reaction of C2-8 alkylene oxides with CO2 at 40-190° and <10 bar. The resultant alkylene carbonate is treated with a (substituted) C1-10 (cyclo)aliphatic alc. at 50-160°. The bifunctional **catalyst** [AbXb]m [BcYd]n (A = specified metal cation; X = organic or inorg. cation; B = cation selected from alkali metal, alkaline earth metal, quaternary ammonium, phosphonium, arsonium, sulfonium, etc.; Y = halo, e.g., Br, iodo, with provisos; a, b = 1-5; c, d = 1-3, neutral salt formed; m, n = 0.001-1) is used in both steps. The **process** was used to prepare (MeO)2CO from ethylene oxide and CO2 using ZnCl2 and Bu4NI as **catalyst** components.

L6 ANSWER 19 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1992:173762 HCAPLUS
DOCUMENT NUMBER: 116:173762
TITLE: **Process** for the preparation of polyalkoxylated aromatic compounds
INVENTOR(S): Huet, Michel; Nobel, Dominique
PATENT ASSIGNEE(S): Rhone-Poulenc Chimie SA, Fr.
SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
EP 463946	A1	19920102	EP 1991-401683		19910621
R: DE, FR, GB, IT, NL					
FR 2663925	A1	19920103	FR 1990-8071		19900627
FR 2663925	B1	19940422			
FR 2669924	A1	19920605	FR 1990-15000		19901130
FR 2669924	B1	19930129			
JP 04261134	A2	19920917	JP 1991-181547		19910627
PRIORITY APPLN. INFO.:			FR 1990-8071	A	19900627
			FR 1990-15000	A	19901130

OTHER SOURCE(S): CASREACT 116:173762; MARPAT 116:173762
AB The title compds. were prepared by treating an aromatic compound bearing at least
one halogen atom and at least one OH group with an alkaline or alkaline earth alkoxide in presence of a Cu-containing **catalyst** and a cocatalyst chosen from organic carbonates, organometallic carbonates, or CO2. Next, direct O-alkylation of the OH group(s) was realized with alkylating agents: alkyl halides, dialkyl sulfates, **dialkyl carbonates.** E.g., a mixture of 173.2 g 5-bromo-4-hydroxy-3-methoxybenzaldehyde, 162 g NaOMe, 1785 cm3 MeOH, 8.3 g CuCO3.Cu(OH)2, and 16 g CO2 was stirred for 4 h at 125°. The mixture was then treated with 150 g MeCl at 120° for 3 h to give 100% conversion and 92% 3,4,5-trimethoxybenzaldehyde.

L6 ANSWER 20 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:408100 HCAPLUS
DOCUMENT NUMBER: 115:8100
TITLE: Preparation of **dialkyl carbonates** by carbonylation of alkyl nitrites over platinum-containing co-**catalyst**
INVENTOR(S): Nishihira, Keigo; Mizutare, Katsuhiko; Tanaka, Shuji
PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 425197	A2	19910502	EP 1990-311469	19901018
EP 425197	A3	19910911		
EP 425197	B1	19940601		
EP 425197	B2	19980729		
R: BE, DE, ES, FR, GB, IT, NL				
JP 03141243	A2	19910617	JP 1989-274816	19891024
JP 08025961	B4	19960313		
JP 04089458	A2	19920323	JP 1990-201146	19900731
US 5162563	A	19921110	US 1990-599134	19901017
ES 2054265	T3	19940801	ES 1990-311469	19901018
JP 09110807	A2	19970428	JP 1996-182808	19960624
JP 2850859	B2	19990127		

PRIORITY APPLN. INFO.: JP 1989-274816 A 19891024
JP 1990-201146 A 19900731

AB A **process** for the preparation of a carboxylate diester comprises the reaction of CO with a nitrite in the presence of a **catalyst** containing a Pt group metal and a metal selected from Fe, Cu, Bi, Co, Ni, Sn on a carrier. A **catalyst** was prepared by impregnating activated carbon with a solution containing 0.35 g PdCl2, 0.34 g CuCl2, and 100 mL 5N HCl.
A gaseous mixture containing Me nitrite 15, CO 10, NO 3, MeOH 6, and N 66 vol % was passed under normal pressure through a reactor charged with the above **catalyst.** The space-time yield of (MeO)2CO was 220 g/L with a selectivity of 96%; MeO2CCO2Me and HCO2Me were formed as byproducts. The use of a **catalyst** prepared from PdCl2 alone gave a space-time yield of 120 g/L and a selectivity of 90%.

L6 ANSWER 21 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:142693 HCAPLUS
DOCUMENT NUMBER: 114:142693
TITLE: **Process** for the preparation of **dialkyl carbonates** from alcs. and carbon monoxide and oxygen without **catalyst** recycling
INVENTOR(S): Joerg, Klaus; Mueller, Franz Josef; Harder, Wolfgang; Kummer, Rudolf
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3926709	A1	19910214	DE 1989-3926709	19890812
EP 413215	A2	19910220	EP 1990-114910	19900803
EP 413215	A3	19920212		
EP 413215	B1	19940420		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
ES 2051418	T3	19940616	ES 1990-114910	19900803
US 5142087	A	19920825	US 1990-564324	19900808
JP 03099041	A2	19910424	JP 1990-211749	19900813
JP 2859395	B2	19990217		

PRIORITY APPLN. INFO.: DE 1989-3926709 A 19890812
OTHER SOURCE(S): CASREACT 114:142693; MARPAT 114:142693

AB A **process** for the preparation of **dialkyl carbonates** ROC(O)COR (R = C1-4-alkyl) comprises the reaction of C1-4-alcs. with CO and oxygen in the presence of a Cu-containing **catalyst** at elevated temperature and pressure. CO and oxygen are passed through the **catalyst** -alc. mixture in a reactor a rate of 1-100 L/h for each g Cu contained in the Cu **catalyst.** Part of the gas mixture reacts with the alc. and is converted to ROC(O)COR and H2O and remaining CO is used to sweep the alc., ROC(O)COR, and H2O from the mixture The gaseous mixture is partitioned into a liquid and a gaseous fraction and the gaseous phase can optionally be recycled. The liquid fraction containing alc., ROC(O)COR, and H2O is separated and the alc. is optionally recycled; the amount of alc. swept from the reactor is continuously replaced. Thus, CO (60 L/h) and oxygen (3 L/h) was passed through a reactor containing MeOH and 0.7 mol/L Cu(OMe)Cl at 25 bar at 125°; the room-time yield of MeOC(O)COMe (I) was 25-35 g. I was swept from the reactor in form of a ternary azeotrope which was separated into a liquid and a gaseous phase; I in 13% yield from MeOH in 98-100% selectivity.

L6 ANSWER 22 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1991:142692 HCAPLUS
DOCUMENT NUMBER: 114:142692
TITLE: **Process** for preparation of **dialkyl carbonates** from alcs., carbon monoxide and oxygen in the presence of cyclic ureas as cosolvents and **copper catalysts**
INVENTOR(S): Joerg, Klaus; Kummer, Rudolf; Mueller, Franz Josef
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 4 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3926710	A1	19910214	DE 1989-3926710	19890812
EP 413217	A2	19910220	EP 1990-114912	19900803
EP 413217	A3	19920212		
EP 413217	B1	19940608		
R: BE, CH, DE, ES, FR, GB, IT, LI, NL				
ES 2054176	T3	19940801	ES 1990-114912	19900803
US 5151541	A	19920929	US 1990-562708	19900806
JP 03109359	A2	19910509	JP 1990-211748	19900813

PRIORITY APPLN. INFO.: DE 1989-3926710 A 19890812
OTHER SOURCE(S): CASREACT 114:142692; MARPAT 114:142692

AB A **process** for the preparation of **dialkyl carbonates** ROC(O)OR (R = C1-10-alkyl) comprises the reaction of alcs. with CO and oxygen in the presence of a Cu **catalyst** and a cyclic urea as cosolvent at elevated temperature and pressure. A mixture of MeOH 105, CuCl 10.5, and dimethylethylene urea 40 g was heated in a corrosion-resistant autoclave to 90° for 15 min 8 bar oxygen; oxygen was replaced and the mixture was heated for 30 min at 35 bar CO to give 76% MeOC(O)OMe.

L6 ANSWER 23 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:514658 HCAPLUS
DOCUMENT NUMBER: 113:114658
TITLE: **Process** for preparing **dialkyl carbonates**
INVENTOR(S): Romano, Ugo; Rivetti, Franco
PATENT ASSIGNEE(S): Enichem Synthesis S.p.A., Italy
SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 366177	A1	19900502	EP 1989-202575	19891012
EP 366177	B1	19921230		
R: AT, BE, CH, DE, ES, FR, GB, LI, NL, SE				
AT 84022	E	19930115	AT 1989-202575	19891012
ES 2038821	T3	19930801	ES 1989-202575	19891012
JP 02169549	A2	19900629	JP 1989-270510	19891019
JP 2881317	B2	19990412		
US 5206409	A	19930427	US 1991-734014	19910719

PRIORITY APPLN. INFO.: IT 1988-22353 A 19881019
US 1989-420542 B1 19891011
EP 1989-202575 A 19891012
OTHER SOURCE(S): MARPAT 113:114658

AB Oxidative carbonylation of ROH (R = Me, Et, Pr, Me2CH) in the presence of a **catalyst** system comprising Cu alkoxide halide (CuOR)X (X = Br, Cl) and either CuX2 or HX (0.5-10 mol% with respect to total Cu) at 70-150° and 10-100 atm resulted in higher yields of **dialkyl carbonates.** Cu(OMe)Cl and anhydr. CuCl2 (total of 1.68 mol/L, of

which CuCl2 was 10%) and MeOH (100 mL) were introduced in a pressure vessel, and the system was placed under CO at 75° and 12 atm gage to give 6.51 weight% CO(OMe)2 at 195 min.

L6 ANSWER 24 OF 24 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1990:201124 HCAPLUS
DOCUMENT NUMBER: 112:201124
TITLE: **Catalysts** and **process** for manufacture of carbonate esters
INVENTOR(S): Yokota, Shigeru; Suzuki, Haruhisa
PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02006438	A2	19900110	JP 1988-157391	19880625

PRIORITY APPLN. INFO.: JP 1988-157391 19880625

AB Title esters are manufactured by the reaction of an alc., CO, and O in the presence of a **catalyst** system containing a Pt-group metal compound, a cuprous halide, and an alkaline earth halide. Thus, autoclaving 40 mL MeOH and a gas mixture of N 5.7, CO 3.6, and Ar-O (67:33) 2.7 kg/cm2 in the presence of PdCl2 0.3, CuCl 7.5, and MgCl2 7.5 mmol at 130° for 1 h gave 4.9 mmol di-Me carbonate vs. 3.7 over CuCl-MgCl2 mixture

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L7 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:220207 HCAPLUS
DOCUMENT NUMBER: 142:280559
TITLE: Use of a ionic halide free **copper catalyst** for the production of **dialkyl carbonates**
INVENTOR(S): Stibrany, Robert T.; Mehnert, Christian P.; Matturro, Michael G.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 9 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005054868	A1	20050310	US 2003-655995	20030905
WO 2005026097	A1	20050324	WO 2004-US25363	20040804

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,

AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2003-655995 A 20030905

OTHER SOURCE(S): MARPAT 142:280559

AB The invention relates to a non-corrosive **process** for the preparation of **dialkyl carbonate** by reacting carbon monoxide, alkanol and an oxygen-containing gas in the presence of a ionic **halogen** free **copper catalyst.** Thus, di-Me carbonate was prepared by reacting carbon monoxide, methanol and oxygen in the presence of [1,1'-bis(1-butylbenzimidazol-2-yl)pentane] **copper** (II) di(trifluoromethanesulfonate).

L7 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1992:173762 HCAPLUS

DOCUMENT NUMBER: 116:173762

TITLE: **Process** for the preparation of polyalkoxylated aromatic compounds

INVENTOR(S): Huet, Michel; Nobel, Dominique

PATENT ASSIGNEE(S): Rhone-Poulenc Chimie SA, Fr.

SOURCE: Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 463946	A1	19920102	EP 1991-401683	19910621
R: DE, FR, GB, IT, NL				
FR 2663925	A1	19920103	FR 1990-8071	19900627
FR 2663925	B1	19940422		
FR 2669924	A1	19920605	FR 1990-15000	19901130
FR 2669924	B1	19930129		
JP 04261134	A2	19920917	JP 1991-181547	19910627

PRIORITY APPLN. INFO.: FR 1990-8071 A 19900627
FR 1990-15000 A 19901130

OTHER SOURCE(S): CASREACT 116:173762; MARPAT 116:173762

AB The title compds. were prepared by treating an aromatic compound bearing at least one **halogen** atom and at least one OH group with an alkaline or alkaline earth alkoxide in presence of a Cu-containing **catalyst** and a cocatalyst chosen from organic carbonates, organometallic carbonates, or CO2. Next, direct O-alkylation of the OH group(s) was realized with alkylating agents: alkyl halides, dialkyl sulfates, **dialkyl carbonates.** E.g., a mixture of 173.2 g 5-bromo-4-hydroxy-3-methoxybenzaldehyde, 162 g NaOMe, 1785 cm3 MeOH, 8.3 g CuCO3.Cu(OH)2, and 16 g CO2 was stirred for 4 h at 125°. The mixture was then treated with 150 g MeCl at 120° for 3 h to give 100% conversion and 92% 3,4,5-trimethoxybenzaldehyde.

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	98.90	99.11

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-21.17	-21.17

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